

DTI Quality Initiative Program QuIP & the Pursuit of Kaizen



DQP MEETING ON APRIL 23, 2010

PRESENTED BY:

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About QuIP



- Quality Initiative Program

- Established team during Spring 2009

- Developed Program Charter

- Formalized Plan for implementation

- Gained approval from new Administration: Quality Month & Current State of Key Processes

- Executed Quality Month Celebration in October 2009

- Completed the Current State of Key Processes project

Recommended QuIP Projects



Total of 11 projects

- P1: Identify Current State Identification of Key Processes Project
- P2: Define Quality Management System (QMS)
- P3: Build Infrastructure
- P4: Manage Opportunities For Improvements (OFIs) Merged into P1
- P5: Develop Quality Plan
- P6: Develop Quality Policy
- P7: Establish oversight committee
- P8: Engage in Baldrige
- P9: Deploy Balanced Scorecard
- P10: Celebrate Quality Month 2009
- P11: Establish Quality Initiative Framework

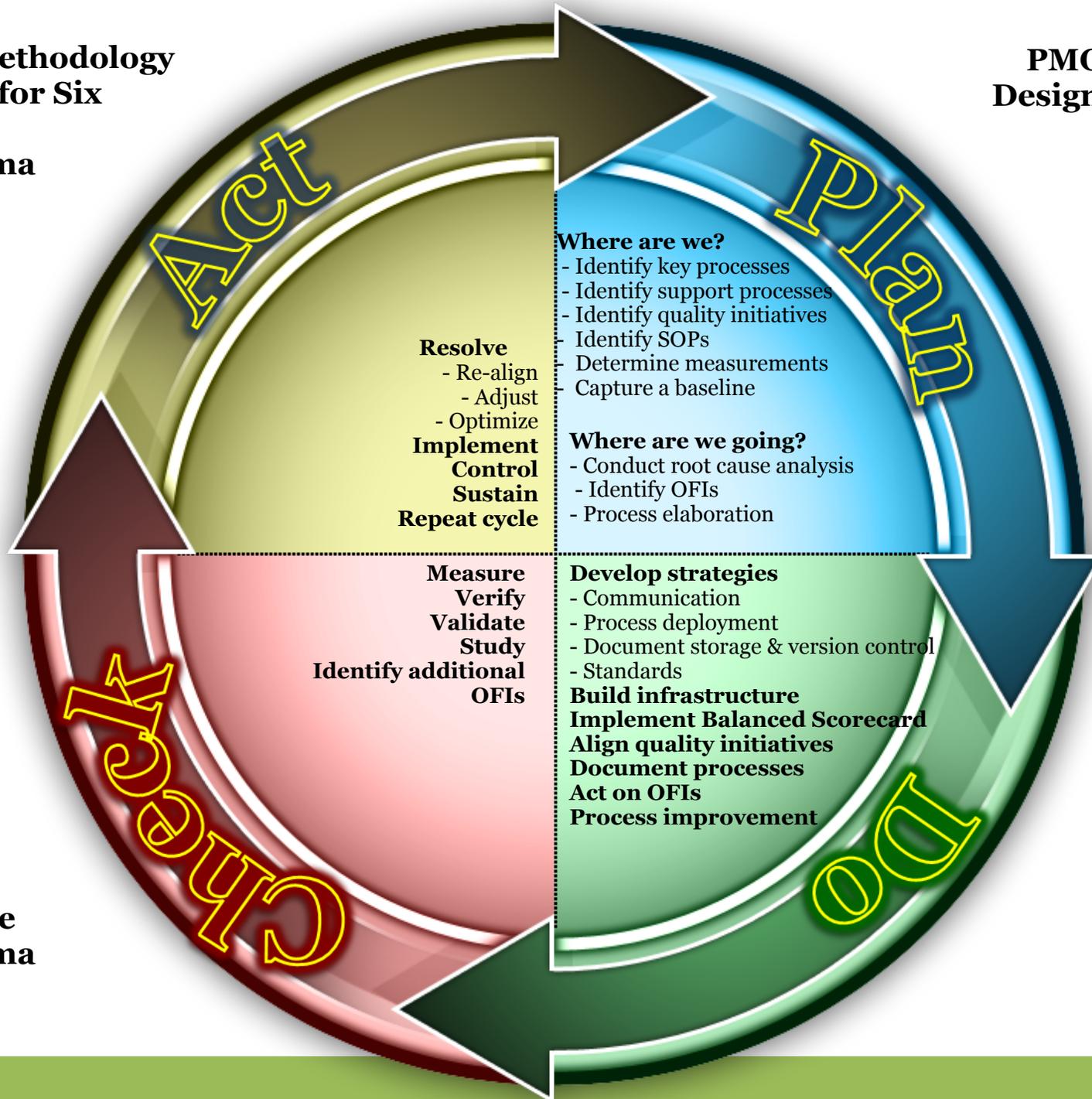
QuIP Overview



- Attended the DQP Workshop for Lean Government
- Created WBS for the process review
- Reviewed the Service Catalog, GPR, LDRPS, RACI, SDLC
- Interviewed QuIP team for insight to key processes
- Received Sponsor approval for 5 proposed processes:
 - Business Case Review
 - Business Requirements
 - Verification and Validation
 - Physical and Network Security
 - Incident Management

**PMO Methodology
Design for Six
Sigma
Six Sigma**

**PMO Methodology
Design for Six Sigma
Baldrige**



**Baldrige
Six Sigma
CMMI**

**ITIL
CMMI**

Value Stream Mapping Wastes & Outcomes



Focus on identification and elimination of non-value-added items

Wastes – which to reduce?

- Overproduction
- Waiting
- Transportation
- Non-value added processing
- Excess inventory
- Defects
- Excess motion
- Underutilized people

Outcomes – what to achieve?

- Typically used for an individual process
- Reduce lead time but increase % complete & accurate
- Eliminate activities and costs that do not add value
- Reduce unnecessary process complexity
- Increase capacity by better utilizing resources
- Decrease defect, incidents, & change order rates
- Instill consistency across processes

Reduce time to delivery

Reduce maintenance costs

Reduce disruption of service

Increase ROI, decrease TCO

Increase customer satisfaction

QuIP Kaizen / VSM Phases



Planning



Current State



Future State



Implementation



Gain Approval
on
recommendations



Gain
Approval

Kaizen

Define Measure Analyze Improve Control



- Includes Value Stream Mapping projects
- Pulled for very focused 50% - 100% of time for 3-6 months for improvement project (VSM 3-5 days)
- Well set boundaries
- Facilitated by a black belt
- Doing something that is roughly right is okay

Reference Lean Six Sigma Pocket Toolbook – Michael L. George, David Rowland, Mark Price, John Maxey

When to use Kaizen



- Obvious wastes and OFIs have been identified
- Scope & boundaries of a problem are clearly defined
- Implementation risk is minimal
- Results are needed immediately
- Gain credibility of problem-solving approach, e.g., DMAIC

Reference Lean Six Sigma Pocket Toolbook – Michael L. George, David Rowland, Mark Price, John Maxey

Conducting a Kaizen DMAIC



Define

Define Kaizen objective

Select Kaizen project & leader

Select participants

Prepare training & materials

Assemble background information

Complete logistics planning

Arrange for coverage on other duties

Arrange for sponsor participation

Contact departments for resources or support

Reference Lean Six Sigma Pocket Toolbook – Michael L. George, David Rowland, Mark Price, John Maxey

Conducting a Kaizen DMAIC



Measure

- Validate value stream map
- Observe and collect needed metrics

Analyze

- Validate root causes & identify sources of waste
- Review waste elimination techniques / brainstorm process improvements for eliminating NVA tasks & reducing variation

Improve

- Create action item list
- Implement process improvements (train, test, fine-tune)

Control

- Create SOPs
- Present results to management
- Sustain – monitor results

Reference Lean Six Sigma Pocket Toolbook – Michael L. George, David Rowland, Mark Price, John Maxey

QuIP's Value Stream Mapping PDCA



PLAN

- Determine what individual products, service, or family to map.
 - Define the problem and determine scope: What are the current conditions? What are the right opportunities? What is to be included/excluded?
 - Prepare Project Charter
 - Scope a Lean Project: Includes processes that are being evaluated
 - Define goals and targets; e.g., increase %C&A, decrease lead time, eliminate wastes, etc.

QuIP's Value Stream Mapping PDCA



DO

Develop VSM

- Conduct VSM session
- Document the current state
- Determine wastes and problems
- Identify opportunities for improvements
- Determine anticipated outcomes

Analyze VSM results

- Enter information into report

CHECK

- Verify with session team that VSM and report are okay
- Identify any additional OFIs

ACT

- Update VSM and report if needed
- Present findings to Sponsors
- Acquire approval to begin Future State

Business Case Review



- Value stream map confidential

Business Case Review



- Value stream map confidential

OuIP VSM Report

Improvements Recommended	Priority	Waste / Problems to be addressed	Anticipated Outcomes	Status

Additional footnotes, comments, or observations

Metrics	Current State
Lead Time	40 days
Process Time	6.5 days
% Correct and Accurate	97%
No. of Steps in Process	7
No. of signatures/approvals	4

Report Sample



- Report sample confidential

Business Case Review



- Value stream map confidential

Verification & Validation



- Value stream map confidential

Typical wastes identified by VSM



- Overproduction
- Waiting
- Transportation
- Non-value added processing
- Excess inventory
- Defects
- Excess motion
- Underutilized people

From DEMEP Lean Government class

Key Observations – Waste & Anticipated Outcomes



Common areas of waste to be addressed:

Inconsistent processes that are not repeatable

Inconsistent usage of methodology and tools

Large number of defects, incidents & change orders resulting in much rework; rework = time & expense wasted

No metrics for management reporting

Lack of traceability Business Case to Requirements to Test Cases

Common anticipated outcomes of recommendations:

Measureable and traceable improvements

Continuity and traceability between processes and deliverables

Reduced variation for processes, methodology, & tools → Consistency & repeatable processes → Base for efficient process improvements

Reduction in defects, incidents, & change orders → Less rework & duplication and increased % complete & accurate

Documented and enforced business case through requirements and testing processes → formalized and repeatable governance process → Support from highest level

Above → Decreased time to delivery, reduced maintenance & project time/costs, reduced service disruptions → Increased customer satisfaction, increased ROI, decreased TCO, more mature organization, and acceptance as being leader in the State

Next Steps



1. Determine a methodology, processes, and tools for Business Case, Business Requirements, and Verification and Validation.

2. Establish and follow governance of these processes. Support required from highest levels down.

3. Tie processes together, especially Business Case, Business Requirements, and Verification and Validation.

4. Incorporate methodology, processes, tools, governance system into the quality plan. Communicate the quality plan DTII-wide.

5. Develop a DTI Quality Policy.

5. Develop and deploy DTI Quality Plan. Use plan to bring under one umbrella all quality related activities, and also ease integration brought about by ITC.

Recommended Reading



- **Lean Six Sigma Pocket Toolbook** – Michael L. George, David Rowlands, Mark Price, John Maxey
- **Lean Thinking: Banish Waste and Create Wealth in Your Corporation** – James Womack & Daniel T. Jones
- **Getting the Right Things Done: A Leader's Guide to Planning and Execution** – Pascal Dennis & Jim Womack
- **Learning to See: Value Stream Mapping to Add Value and Eliminate MUDA** – Mike Rother & John Shook
- **The Team Handbook** – Peter R. Scholtes, Brian L. Joiner, Barbara J. Streibel

Reduce Lead Time – Increase % C&A?

